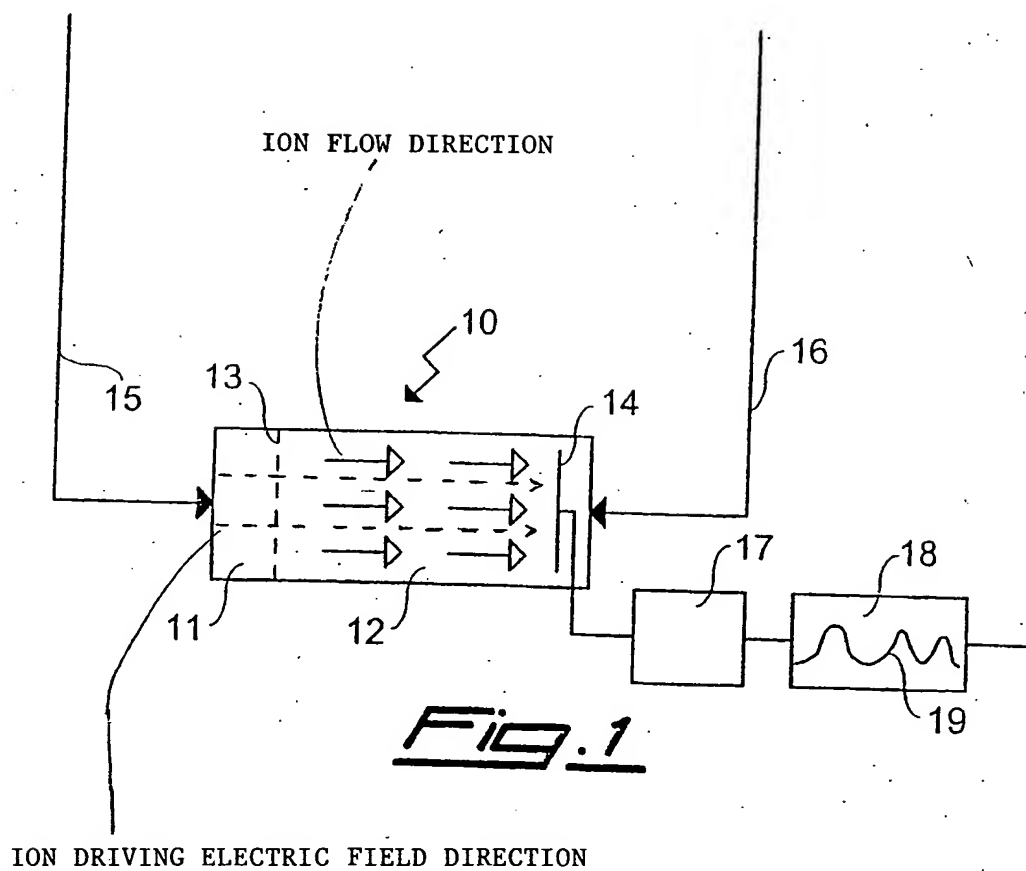




REPLACEMENT SHEET
1/3





Title: Method for Measuring the Concentration of Water in Argon, ...
Inventor: Luca Pasterla
Application No.: 10/722,190 Customer No.: 570
Attorney Docket No.: 6023-170US (BX2390M)

REPLACEMENT SHEET

2/3

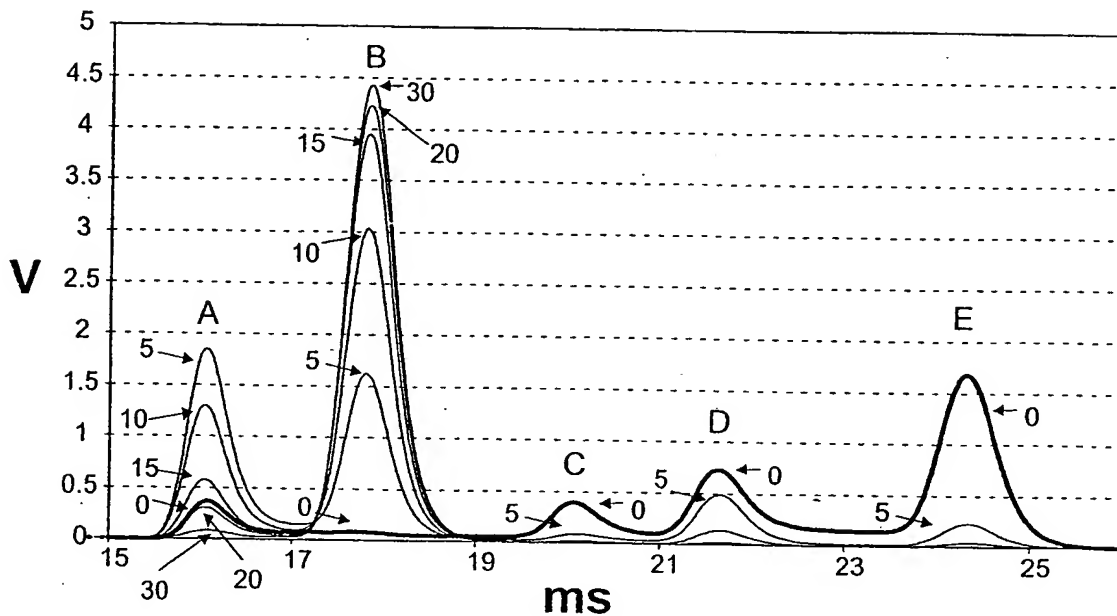


Fig. 2

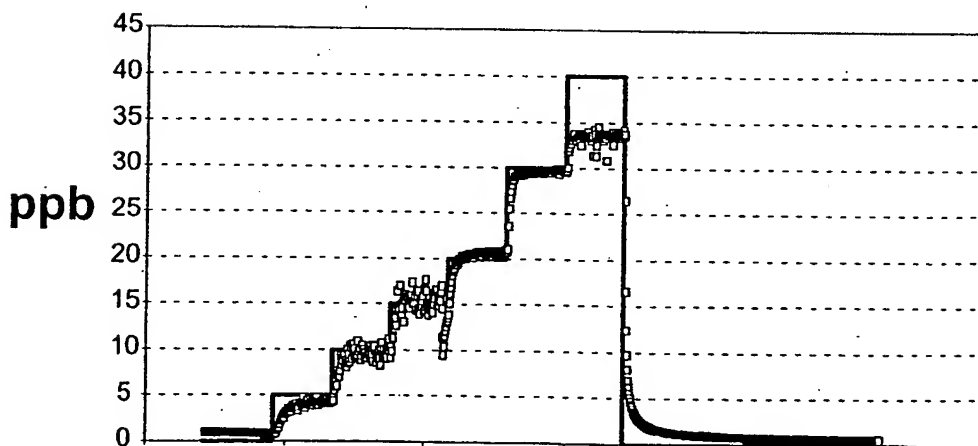


Fig. 3



NEW SHEET
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Introducing a gas mixture to be analyzed comprising water and at least one selected from the group consisting of argon, hydrogen, nitrogen, and helium into an IMS instrument with a counter-flow of pure gas



Obtaining a signal variable over time and proportional to a number of ions detected by an ion detector of the IMS instrument



Determining two time intervals (A, B) corresponding to drift times in the IMS instrument of H_3O^+ and $(\text{H}_2\text{O})_2^+$ ions present in the gas mixture



Obtaining peaks of the signal in the two determined time intervals (A, B)



Calculating the water concentration in the gas mixture according to a ratio of intensity of the two peaks obtained in the signal.

Fig. 4